

1. What is the output of this code?

```
x = True  
y = False  
print(x and y)
```

- a) True
- b) False
- c) None
- d) Error

Correct Answer: b) False

2. What is the result of this code?

```
x = [1, 2, 3]  
print(len(x))
```

- a) 2
- b) 3
- c) 4
- d) Error

Correct Answer: b) 3

3. What does this code print?

```
for i in range(2, 6, 2):  
    print(i)
```

- a) 2 4 6
- b) 2 4
- c) 4 6
- d) Error

Correct Answer: b) 2 4

4. What will this loop print?

```
x = 0  
while x < 3:  
    print(x)  
    x += 1
```

- a) 0 1 2
- b) 0 1 2 3
- c) Infinite loop
- d) Error

Correct Answer: a) 0 1 2

5. What does the following code return?

```
def add(a, b):  
    return a + b  
  
result = add(3, 4)  
print(result)
```

- a) 3
- b) 4
- c) 7
- d) None

Correct Answer: c) 7

6. What is the output of this Boolean expression?

```
x = 5  
y = 10  
print(x < y and x != y)
```

- a) True
- b) False
- c) Error
- d) None

Correct Answer: a) True

7. What does this function do?

```
def greet(name):  
    return f"Hello, {name}!"  
  
print(greet("Alice"))
```

- a) Print Hello, {name}!
- b) Print Hello, Alice!
- c) Error
- d) None

Correct Answer: b) Print Hello, Alice!

8. What is the value of x?

```
x = 10 // 3
```

- a) 3.33

- b) 3
- c) 4
- d) Error

Correct Answer: b) 3

9. What does the following code return?

```
def multiply(a, b=2):  
    return a * b  
  
print(multiply(3))
```

- a) 3
- b) 6
- c) Error
- d) None

Correct Answer: b) 6

10. What does this code output?

```
for i in range(3):  
    for j in range(i):  
        print(j, end="")
```

- a) 0 1 2
- b) 01
- c) 0 0 1
- d) Nothing

Correct Answer: c) 0 0 1

11. What will this code print?

```
x = [1, 2, 3]  
print(x[-1])
```

- a) 1
- b) 2
- c) 3
- d) Error

Correct Answer: c) 3

12. What does this code do?

```
x = {1, 2, 3}
x.add(4)
print(x)
```

- a) Add 4 to x
- b) Error
- c) Remove duplicates from x
- d) None of the above

Correct Answer: a) Add 4 to x

13. What does the is operator check in Python?

- a) Equality of values
- b) Equality of memory locations
- c) None of the above
- d) Both a and b

Correct Answer: b) Equality of memory locations

14. What will this print?

```
x = [1, 2, 3]
y = x
y[0] = 0
print(x)
```

- a) [0, 2, 3]
- b) [1, 2, 3]
- c) Error
- d) None

Correct Answer: a) [0, 2, 3]

15. What does this code output?

```
x = [i for i in range(3)]
print(x)
```

- a) [1, 2, 3]
- b) [0, 1, 2]
- c) [3, 2, 1]
- d) Error

Correct Answer: b) [0, 1, 2]

16. What does this code print?

```
x = [1, 2, 3, 4, 5]
print(x[1:4])
```

- a) [2, 3, 4]
- b) [1, 2, 3]
- c) Error
- d) None

Correct Answer: a) [2, 3, 4]

17. What does this dictionary comprehension do?

```
x = {i: i * i for i in range(3)}
print(x)
```

- a) Create a list
- b) Create a dictionary
- c) Error
- d) None

Correct Answer: b) Create a dictionary

18. What does this code do?

```
def test():
    return 10

x = test()
print(x)
```

- a) Print 10
- b) Print None
- c) Error
- d) Nothing

Correct Answer: a) Print 10

19. What will this function print?

```
def greet(name="World"):
    return f"Hello, {name}!"

print(greet())
```

- a) Hello, !
- b) Hello, World!
- c) Error
- d) None

Correct Answer: b) Hello, World!

20. What does this function output?

```
def factorial(n):  
    if n == 0:  
        return 1  
    else:  
        return n * factorial(n - 1)  
  
print(factorial(3))
```

- a) 3
- b) 6
- c) 9
- d) Error

Correct Answer: b) 6